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Distribution and spread of Serapias Helleborine in New York State

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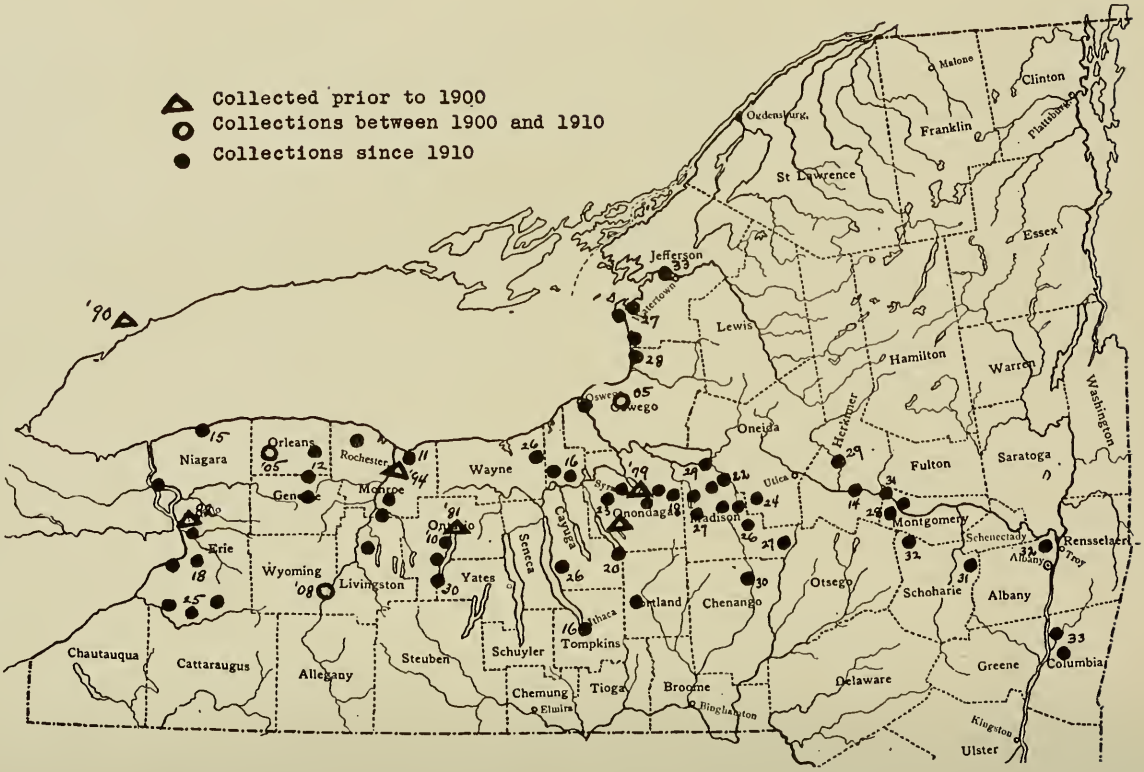
The number of extralimital species of plants which have found a place in our flora is so large that only occasionally is there more than passing comment regarding any of them. They are chiefly the so-called "weeds" of our cultivated and waste fields, meadows and cut over woodlands. Some species like *Epilobium hirsutum* and *Lythrum Salicaria* have within recent years become conspicuous and not altogether undesirable elements of the flora of our river borders and other wet places across the state.

In the eastern United States the orchid family (Orchidaceae) contains but a single naturalized species, *Serapias Helleborine* L. How it first reached our shores is now impossible to say, nor is it certain that it came through a single introduction. The first discovery of it was made near Syracuse by Mrs. M. O. Rust, August 2, 1879 and by Miss M. P. Church, August 6, 1879 (Bull. Torrey Bot. Club 6: 329. 1879). It was next found near Canandaigua, July 22, 1881, by members of the Canandaigua Botanical Club, near Buffalo, by David F. Day, in 1882, and near Rochester by M. S. Baxter in 1894. Between 1900 and 1910 only two or three additional localities were added to this list, but since 1910, due perhaps to the more rapid spread of the species and more intensive field work on the part of local botanists, the species has been found eastward to the Hudson river valley and northward to the St. Lawrence.

The plant is not mentioned by Macoun (Cat. Canadian Plants Pt. IV, 1888), and the earliest Canadian records which I can find are collections in the National Herbarium at Washington from Lambton Mills, Ontario (near Toronto), by W. and O. White, July 1890, and near Montreal by G. B. Ashford, July 31, 1904.



Outline map of New York State showing the distribution and spread of Serapias Helleborine L., between 1879 and 1933.

From the centers of earliest discovery in central and western New York the species has spread eastward and southward, chiefly in the moist woods of the limestone areas. Its absence from adjacent and intervening areas of acid soils seems to indicate its decided preference for calcareous soils. In 1930 it was observed in Montgomery county, in 1931 in Schoharie county, in 1932 in Albany county and in 1933 in Columbia county in the Hudson valley. These observations seem to indicate that the species may already have reached the calcareous areas of western New England and may be expected to appear farther south in the Hudson valley and northward into Vermont as well as in the calcareous areas down the St. Lawrence river region.

It seems desirable to place some of these facts on record, and the accompanying map is based upon collections in the New York State Museum, the Gray Herbarium, New York Botanical Garden herbarium, and the herbarium of the United States National Museum. It is not the purpose of this note to cite the numerous collections which have been made, but merely to indicate on the accompanying map the year of collection for most of the localities known. This shows perhaps better than any other method the progressive spread of the species from 1879 to 1933, a period of over fifty years since the initial discovery of the species near Syracuse. Reference to the map also shows that the known localities seem to form five or six rather definite groups. It is possible that the species occurs more evenly distributed than this grouping seems to indicate. On the other hand it may represent the spread of the species from separate centers of introduction occurring at different dates.

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